WHAT IS CLAIMED IS:

1. An electrical interface assembly comprising:

a housing panel comprising two electrically-conductive layers separated by insulating material;

a through-opening across opposite sides of the housing panel;

an interface module disposed within the through-opening with a contact end facing each of said opposite sides of the housing panel; and

connecting means for electrically connecting the interface module to said electrically-conductive layers in the housing panel;

wherein said opposite contact ends in said interface module are adapted to provide electrical interface on opposing sides of said housing panel;

wherein said interface module provides an active element to influence a signal between said contact ends in a predetermined manner.

2. The interface assembly of claim 1 wherein said interface module includes an electrically-conductive cap on one of the contact end.

3. The interface assembly of claim 1, wherein said electrical interface module includes a single-ended-signal interface module between said opposite sides of the housing.

4. The interface assembly of claim 3, wherein an output from the single-ended-signal interface module is connected to an input of a second single-ended-signal interface modules through one of said conductive layers.

5. The interface assembly of claim 1, wherein said electrical interface module includes a differential electrical interface module.

6. The interface assembly of claim 1, wherein said interface modules comprises a single-contact end on one side of the housing panel and a two-contact end on the opposite side of the housing.

7. The interface connector assembly of claim 1, wherein the active element is surface deposited onto the module.

8. The interface connector assembly of claim 1, wherein the active element comprises a discrete component.

9. The interface assembly of claim 8, wherein the discrete component includes contact pads for connection with said interface module.

10. The interface connector assembly of claim 9, wherein the discrete component is wire bonded to the interface module.

11. The interface connector assembly of claim 9, wherein the discrete component is directly connected to the interface module.

12. The interface assembly of claim 1, further comprising at least one additional through-opening in the housing panel; at least one additional interface module with corresponding additional contact ends, said at least one additional interface module being inserted within the at least one additional through-opening of the housing panel; and at least one additional connecting means for electrically connecting the at least one additional interface module to said electrically-conductive layers in the housing panel;

wherein the additional contact ends provide additional electrical signals.

13. The interface assembly of claim 12, wherein said interface module and additional interface module are adapted to process differential signals and the interface module is connected to the additional interface module through separate traces in the conductive layers.

14. An electrical signal-source assembly comprising:

a housing panel with at least two electrically-conductive layers separated by insulating material;

a through-opening across opposite sides of the housing panel;

an signal-source module disposed within the through-opening with a contact end facing one of said opposite sides of the housing panel; and

connecting means for electrically connecting the signal-source module to said electrically-conductive layers in the housing panel;

wherein the contact end provides an electrical signal.

15. The signal-source assembly of claim 14, wherein said contact end includes an electrically-conductive cap.

16. The signal-source connector assembly of claim 14, wherein a signal source is surface deposited onto the signal-source module.

17. The signal-source connector assembly of claim 16, wherein the signal source comprises at least one integrated circuit.

18. The signal-source connector assembly of claim 16, wherein the signal source is a single-ended signal source.

19. The signal-source connector assembly of claim 16, wherein the signal source is a differential signal source.

20. The signal-source connector assembly of claim 16, wherein the signal source is an oscillator.

21. The signal-source connector assembly of claim 16, wherein the signal source is a temperature-measuring device.

22. The signal-source assembly of claim 14, further comprising at least one additional through-opening in the housing panel; at least one additional signal-source module with a corresponding additional contact end, said at least one additional signal-source module being inserted within the at least one additional through-opening of the housing panel; and at least one additional connecting means for electrically

connecting the at least one additional signal-source module to said electrically-conductive layers in the housing panel;

wherein the additional contact end provides an additional electrical signal.